

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See form PCT/ISA/210**

Applicant's or agent's file reference

E 9436 PCT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/EP2005/000601

International filing date (day/month/year)

21.01.2005

Priority date (day/month/year)

22.01.2004

International Patent Classification (IPC) or both national classification and IPC

H01F38/12, H01F27/36

Applicant

ERA AG

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability: citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

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International application No.

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Box No. 1

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. II

Priority

1. ☐ The following document has not yet been furnished:

☐ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).

☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date in the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

The validity of the priority claim has not been considered because the International Searching Authority does not have in its possession a copy of the earlier application whose priority has been claimed or, where required, a translation of that earlier application. This opinion has nevertheless been established on the assumption that the relevant date (Rules 43bis1 and 64.1) is the claimed priority date.

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/EP2005/000601

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability:
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-11</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	_____	YES
	Claims	<u>1-11</u>	NO
Industrial applicability (IA)	Claims	<u>1-11</u>	YES
	Claims	_____	NO

2. Citations and explanations:

- 1 Reference is made to the following documents:
- D1: DE 199 27 820 C1 (BREMI AUTO-ELEKTRIK ERNST
BREMICKER GMBH) 6 July 2000 (2000-07-06)
- D2: US-A-3 436 704 (AUGUST I. KETO ET AL.) 1 April
1969 (1969-04-01)

- 2 The present application does not meet the requirements of PCT Article 33(1) because the subject matter of claim 1 does not involve an inventive step within the meaning of PCT Article 33(3).

Document D1 is considered to be the closest prior art to the subject matter of claim 1. It discloses (the references between parentheses relate to said document):

ignition coil for an internal combustion engine having an, in particular cylindrical, primary coil body (2) which carries a primary winding, a low-voltage connection region (12) for connecting the primary winding to a low-voltage, a secondary winding, which is inductively coupled to the primary

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citations and explanations supporting such statement

winding and arranged on a, in particular cylindrical, secondary coil body (3), for providing a high voltage for a spark plug of the internal combustion engine, with the primary coil element (2) and the secondary coil element (3) being arranged concentrically with respect to one another, and a high-voltage connection region (7) in which the secondary winding makes contact with the spark plug, with an electrically conductive and substantially cylindrical layer having mechanical damping properties being arranged within an annular space which is bounded by the outer of the two windings.

The subject matter of claim 1 therefore differs from the known D1 in that:

the electrically conductive layer is in the form of a sandwich structure comprising at least two sublayers with an interposed intermediate layer having mechanical damping properties.

The problem addressed by the present invention can therefore be considered that of producing an ignition coil as per the prior art, with "the electrical screening and mechanical strength of the ignition coil being improved further".

However, these features of these claims have already been used for the same purpose in a similar transformer, cf. document D2, in particular column 3, line 66 - column 4, line 44. If a person skilled in the art wished to achieve the same aim in an

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ignition coil as per document D1, he could easily apply these features to like effect to the subject matter of D1. In this way he would arrive at an ignition coil as per claim 1 without thereby being inventive.

The subject matter of claim 1 therefore cannot be considered to involve an inventive step.

- 3 Dependent claims 2-22 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for inventive step. The reasons are as follows:

these claims are either known from the cited documents (claims 2-4, 7) or relate to minor structural modifications to the ignition coil as per claim 1 of the kind that a person skilled in the art routinely makes on the basis of familiar considerations, especially since the resulting advantages are readily foreseeable (claims 5, 6, 8-11),

cf.

claims 2, 4, 7: D2

claim 3: D1

Accordingly, the subject matter of claims 2-11 does not involve an inventive step.

- 4 The subject matter of the application relates to an ignition coil for an internal combustion engine, and this is obviously industrially applicable (PCT

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Article 33(4)).